

78. (new) The apparatus of claim 77, wherein the shaft further includes a proximal end portion, the proximal end portion being essentially linear, and the first curve and the second curve are in the same plane relative to the longitudinal axis of the proximal end portion of the shaft, and the first curve and the second curve are in opposite directions relative to the longitudinal axis of the proximal end portion of the shaft.

79. (new) The apparatus of claim 76, wherein further comprising a tracking device located at the shaft distal end portion comprises a material selected from the group consisting of titanium alloys and nickel alloys.

REMARKS

Applicant wishes to express appreciation for the indications: i) that claims 41, 44-48, and 53 are allowed; ii) that claims 7, 8, 11, and 12 would be allowable if re-written in independent form; and iii) that claims 4, 5, 42, 43, 49-52, and 60-64 would be allowable if re-written to overcome the 35 U.S.C. §112, second paragraph rejection.

Support for the amendment to Claim 1 may be found, for example, starting on page 60, line 27 through page 63, line 18 of the specification as filed.

Claim 60 is amended in independent form and incorporates the limitation of base claim 59.

Support for new claims 69-76 may be found, for example, starting on page 60, line 27 through page 63 of the specification as filed.

Support for new claims 77-80 may be found, for example, starting on page 80, line 16 through line 28 of the specification as filed.

Claims 42, 49, 50, 60, 61, 63, and 64 are amended to place the claims in proper form regarding antecedent basis and dependency. Applicant believes that these amendments do not introduce any new matter into the claims.

Accordingly, claims 1-16, 41-53, and 60-80 are currently pending in the subject application.

35 U.S.C. §112

The Office Action rejected claims 3-5, 42, 43, 49-52, and 60-64 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph. Applicant amended claims 3, 42, 49, 50, 60, 61, 63, and 64 to place the claims in compliance with 35 U.S.C. §112, 2<sup>nd</sup> paragraph.

Applicant respectfully request clarification regarding the rejection of claim 4. Claim 4 depends from claim 2, neither of which contain any rejection under 35 U.S.C. §112. Yet, in the section entitled “Allowable Subject Matter”, the Office Action indicates that claim 4 (and 5) would be allowable if rewritten to overcome this rejection.

Apart from the above, applicant disagrees with the Office Action’s basis for the rejection of claim 52. The Office Action states that the reference in claim 52 “to a second angle is vague since a first angle has not been recited in the particular line of claim dependency.” Applicant respectfully note that it is a well established rule of law that permits the applicant broad discretion and latitude to use terms within the claims.

Accordingly, the term “second angle” is not necessarily required to be a relational term (e.g., as in relation to a first angle) as seemingly proposed by the Office Action. Rather, “second angle” may be a descriptive term as well and may indicates that this particular angle is associated or characterized with “the second curve” as defined by the claims. As such, regardless of whether the second angle is the same, different, or related to a “first angle” (as defined by the claims), the term “second angle” denotes that angle which characterizes the “second curve” of the “shaft distal end.” The presence of a “first angle” within this line of claim dependency is not required.

In view of the above, applicant believes that these rejections are traversed.

35 U.S.C. §102 - I

The Office Action rejected claims 1 and 6 under 35 U.S.C. §102(b) as being anticipated by either U.S. Patent No. 5,569,242 to Lax et al. (hereafter “Lax”) or U.S. Patent No. 5,785,705 to Baker (hereafter “Baker”). Applicant disagrees.

Applicant is unable to find any teaching or suggestion in either Lax or Baker to anticipate claims 1 or 6. Moreover, the Office Action fails to cite exactly where these references teach or suggest the elements of either claim 1 or 6.

Applicant notes that Figure 1 of Lax shows a handle (12) and an electrode (14) associated with the handle (12). Although the electrode appears to have a curved profile, such a teaching does not anticipate applicant's claim. Claim 1 of applicant's invention requires a shaft distal end portion having at least one curve proximal to the at least one active electrode. Lax appears to fail to teach or suggest a shaft distal end portion having at least one curve proximal to the at least one active electrode. Although applicant also disagrees with the rejection of claim 6 for other reasons, because Lax fails to anticipate claim 1, claim 6 is anticipated by Lax.

Applicant further notes that Baker also fails to teach or suggest a shaft distal end portion having at least one curve proximal to the at least one active electrode. In Baker, Figures 7, 9, and 11 appear to illustrate variations of the Baker electrode (14) rather than a shaft.

Moreover, neither Lax nor Baker teach or suggest the elements of independent claims 69 or 70.

In the absence of further clarification of where the references teach the elements of applicant's claim, based upon the above reasons, applicant respectfully requests withdrawal of these rejections.

#### 35 U.S.C. §102 - II

The Office Action rejected claims 1, 6, and 14-16 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,126,682 to Sharkey et al. (hereafter "Sharkey"). Applicant disagrees.

Applicant believes that Sharkey teaches a device having an intradiscal section which applies energy (usually via heat) to a vertebral disc. As such, the electrode is located on the intradiscal section (16). (e.g., see Sharkey col. 15, lines 20-30). Accordingly, given this teaching, applicant believes that Sharkey does not teach a device having a shaft distal end portion having at least one curve proximal to the at least one

active electrode. Instead, it appears that in the Sharkey device, the curve is part of any electrode that is used on the intradiscal section.

Because Sharkey fails to anticipate claim 1, Sharkey also fails to anticipate all claims dependent therefrom.

In the absence of further clarification of where the references teach the elements of applicant's claim, based upon the above reasons, applicant respectfully requests withdrawal of these rejections.

35 U.S.C. §102 - III

The Office Action rejected claims 1-3, 6, 9, 10, 13, 59, 65, and 66 under U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,823,955 to Kuck (hereafter "Kuck"). Applicant disagrees.

Claim 59 is cancelled and claims 65 and 66 are amended to depend from amended claim 60.

Regarding claim 1, as amended, and newly added claim 69: Claim 1 requires a shaft distal end portion having a shape comprising at least one curve proximal to the at least one active electrode, where the shaft distal end portion is adapted to be resilient such that upon the application of an external force the shape distorts, whereupon removal of the force the shape restores. Claim 69 requires that the shaft distal end portion is adapted to be resilient such that upon the application of an external force the at least one curve distorts, whereupon removal of the force the at least one curve restores.

Kuck fails to teach the above required limitations. Instead, Kuck appears to teach a device that contains manipulator wires permitting manipulation and deflection of the tip. (e.g., see col. 3, lines 6-20.)

Regarding newly added claim 77: Claim 77 requires a shaft distal end comprising a shape memory material such that actuation of the shape memory material causes the shaft to assume the shape.

In view of the above, Kuck fails to anticipate any of independent claims 1, 69, or 77, and any claim ultimately depending from one of these independent claims.

35 U.S.C. §102 - IV

The Office Action rejected claims 1-3, 6, 59, 65, and 66 under U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,319,250 to Falwell et al. (hereafter "Falwell"). Applicant disagrees.

Claim 59 is cancelled and claims 65 and 66 are amended to depend from amended claim 60.

Claim 1 requires a shaft distal end portion having a shape comprising at least one curve proximal to the at least one active electrode, where the shaft distal end portion is adapted to be resilient such that upon the application of an external force the shape distorts, whereupon removal of the force the shape restores.

Claim 69 requires that the shaft distal end portion is adapted to be resilient such that upon the application of an external force the at least one curve distorts, whereupon removal of the force the at least one curve restores.

Claim 77 requires a shaft distal end comprising a shape memory material such that actuation of the shape memory material causes the shaft to assume the shape.

Falwell relates to a steerable medical catheter guided by control wires. (e.g., see col. 1, lines 5-9 and col. 8, lines 16-38). As such, Falwell fails to anticipate any of independent claims 1, 69, or 77, and any claim ultimately depending from one of these independent claims.

35 U.S.C. §103

The Office Action rejected claims 14-16 under U.S.C. §103(a) as being unpatentable over Kuck in view of Sharkey. Applicant disagrees.

Without regarding the propriety of this rejection, as noted above, Kuck and Sharkey either alone or in combination fail to address the limitations of the base claims from which claims 14-16 ultimately depend. Accordingly, the Office Action fails to establish a *prima facie* case of obviousness with regards to the rejection of claims 14-16.

In view of the above, applicant requests the withdrawal of this rejection.

**SUMMARY**

Applicant believes all outstanding issue raised in the previous Office Action are addressed herein and that the claims are in condition for allowance. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (408) 736-0224.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the claims:**

Claims 1, 3, 42, 49, 50, 60, 61, 63, 64, 65, and 66 are amended, a marked up version follows:

1. (amended) A medical apparatus comprising a shaft including a shaft distal end portion and a shaft proximal end portion, and at least one active electrode disposed on the shaft distal end portion, the shaft distal end portion having a shape comprising at least one curve proximal to the at least one active electrode, where the shaft distal end portion is adapted to be resilient such that upon the application of an external force the shape distorts, whereupon removal of the force the shape restores.

3. (amended) The apparatus of claim 2, wherein the shaft ~~includes a proximal end portion, the~~ proximal end portion ~~being~~ is essentially linear, and the first curve and the second curve are in the same plane relative to the longitudinal axis of the proximal end portion of the shaft, and the first curve and the second curve are in opposite directions relative to the longitudinal axis of the proximal end portion of the shaft.

42. (amended) The combination of claim 41, wherein the shaft further includes a shaft proximal end portion, the proximal end portion being essentially linear, and the first curve and the second curve are in the same plane relative to ~~the~~ a longitudinal axis of the proximal end portion of the shaft.

49. (amended) The combination of claim 41, wherein the at least one active electrode is disposed at ~~the~~ a distal tip of the shaft, the shaft distal end includes a distal linear portion, and a transverse location of the at least one active electrode within the lumen is determined by a length of the distal linear portion.

50. (amended) The combination of claim 41, wherein the at least one active electrode is disposed at ~~the~~ a distal tip of the shaft, the first curve is characterized by a first angle, and the first angle determines a transverse location of the at least one active electrode within the lumen.

60. (amended) A medical apparatus, comprising:

a shaft including a shaft distal tip, a shaft distal end portion, and a shaft proximal end portion, the shaft distal end portion having a first curve and a second curve proximal to the first curve, wherein the first curve and the second curve are in the same plane relative to [the] a longitudinal axis of the proximal end portion of the shaft, and the first curve and the second curve are in opposite directions, and

[The medical apparatus of claim 59, further comprising] an introducer device having a lumen and an introducer distal end, the introducer device adapted for passing the shaft distal end portion through the lumen, wherein the shaft distal tip occupies a substantially central transverse location within the lumen when the shaft distal end portion is passed within the lumen.

61. (amended) The medical apparatus of claim 60, wherein the shaft distal tip occupies a substantially central transverse location within the lumen when the shaft distal end portion is advanced from and retracted into the introducer distal end.

63. (amended) The medical apparatus of claim [59] 60, wherein the shaft includes a distal linear portion, and a transverse location of the shaft distal tip within the lumen is determined by an angle of the first curve and by a length of the distal linear portion.

64. (amended) The medical apparatus of claim [59] 60, wherein the second curve causes a deflection of the shaft distal tip away from a longitudinal axis of the shaft when the second curve is advanced distally beyond the introducer distal end.

65. (amended) The medical apparatus of claim [59] 60, further comprising an electrosurgical probe, wherein the electrosurgical probe includes the shaft.

66. (amended) The medical apparatus of claim [59] 60, comprising a medical instrument selected from the group consisting of: a catheter, a cannula, an endoscope, and a hypodermic needle.